Artigos Técnicos

PASTURE RECOVERY WITH FORAGE LEGUMES

The technological alternatives developed for the recovery of degraded pastures include, for the most part, remediation and soil fertilization associated with its movement, with agricultural implements for the possible removal of compacted layers of soil. Another alternative is the introduction of legumes, which besides increasing yield and quality of forage produced by its ability to fix nitrogen, reduces weight loss donates animals during the dry season. However, the permanence of leguminous pastures depends on the exclusion of the burning, once the deleterious effects of a fire is the destruction of forage legumes.

The soil preparation by plowing and harrowing is always the best way for the establishment of legumes in degraded pastures. The most important factor is the control of existing vegetation. The control of his aggression will give a greater chance of survival for newly established seedlings by reducing competition for water, light and nutrients.

The overgrazing before or after sowing of the legume has been used as an effective alternative to reduce the corrosivity of coverage. When the grazing takes place after planting can help to bury the seeds by trampling and moving the ground, creating microrelevos to assist in setting, mainly by increasing the contact surface between the seed and soil. In grass pastures (Melinis minutiflora), using the competition to reduce overgrazing of vegetation, planting on ridges was the most efficient method for the introduction of Macroptilium atropurpureum cv. Siratro, Desmodium intortum and Centrosema pubescens.

The plowing was the most efficient method for introducing Calopogonium mucunoides in degraded Brachiaria decumbens, which provided the best value for grass-legume. A great establishment of Desmodium ovalifolium and Pueraria phaseoloides, respectively, in pastures of B. decumbens, was obtained with the use of more plowing harrowing in the entire area. However, preparation of the soil may be an alternative tracks to be used in order to reduce the cost of recovery. It is suggested ranges of 2.5 legume as the best alternative for the introduction of P phaseoloides in degraded pastures of B. decumbens.

The exclusive use of physical methods may be insufficient for the recovery of pasture, especially in soils of low natural fertility. In this case, it is essential to ensure an adequate supply, especially those limiting nutrients for forage production. In Rondônia, pastures of B. humidicola recovered with the introduction of legumes (P. phaseoloides, Stylosanthes guianensis and C. pubescens) showed higher yields of forage with the application of 75 kg of P2O5/ha. The successful establishment of legumes in degraded pastures can be directly correlated with their seeding rate. The use of 20 seeds viáveis/m2 was sufficient to establish M. atropurpureum cv. Siratro pastures of B. humidicola without any mechanical interference. For degraded pastures of B. decumbens, regardless of the density of S. guianensis cv. Mineirão (0.5, 1.0 and 2.0 kg / ha), the use of disk harrow + leveling harrow, followed by passage of the roller was the best method that allowed the establishment of the legume.

Animal performance in pastures recovered with the introduction of legumes, generally, is directly correlated with the establishment and participation in the botanical composition of the forage on offer. The introduction of M. atropurpureum and Neonotonia wightii, grazing P. maximum, in the process of degradation allowed increase the carrying capacity of 0.35 AU / ha and 1.1 to 0.81 AU / ha respectively the first and second year of use. In pastures of B. decumbens degraded, the introduction of Centrosema macrocarpum CIAT-5713 and C. acutifolium CIAT-5568, resulted in gains of 830 kg / ha / year and 607 g / animal / day, compared to 550 kg / ha / year and 451 g / animal / day obtained in pasture not recovered. In Pará, the establishment of P. phaseoloides, C. pubescens and S. guianensis in degraded pastures of Panicum maximum provided increments of 16 and 63% respectively for the liveweight gains / animal / year and hectare / year. Using the same pulses, in Rondônia, the increases were 46 and 40% gains in live weight / ha /

year, respectively, for degraded pastures of Hyparrhenia rufa and B. humidicola. In Acre, it was confirmed the viability of pasture recovery of P. maximum by introducing pulses associated with the phosphorus fertilization (50 kg P2O5/ha), used independently of the stocking, which resulted in an increase of 69% in weight gain / area (150 vs.. 253 kg / ha / year .)

The recovery of degraded pastures may be technically feasible through the introduction of forage legumes. To this end, it becomes essential to adopt management practices adequate to ensure a satisfactory establishment, productivity and persistence of introduced species (planting methods, lowering of vegetation with mechanical cultivation and / or chemical, sowing, phosphorus nutrition etc.. .) However, the use of forage germplasm with low nutrient requirements, along with systems and grazing pressures compatible with maintaining the balance of the ecosystem, should be considered as the key to ensuring the productivity of pastures and herds, for periods of time for long, under forest in the humid tropics of Brazil.

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